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Attorney Docket No. PC10925A  
Serial No. 09/865,950  
Response to Office Action of January 11, 2002

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**Marked-up Version Of Claims Showing Changes**

**DO NOT ENTER**

19. (Twice Amended) A method of treating in a mammal a disorder in which the modulation of CCR5 receptors is implicated, which comprises administering to said mammal an effective amount of a CCR5 receptor antagonist compound of claim 1.

22. (Twice Amended) A method of treating, in a mammal, an inflammatory bowel disease, multiple sclerosis, rheumatoid arthritis, graft rejection, [including a kidney or a lung allograft,] endometriosis, type I diabetes, a renal disease, chronic pancreatitis, an inflammatory lung condition or chronic heart failure which comprises administering to said mammal an effective amount of a compound of claim 1.

**REMARKS**

Reconsideration of this application is respectfully requested. This paper is responsive to the Office Action of January 11, 2002. A petition for a three month extension of time is enclosed, extending the deadline from April 11, 2002 until July 11, 2002, and including the requisite fee. Accordingly, this response is timely filed.

**STATUS OF THE CLAIMS**

Following entry of this Amendment, claims 1-9, 19-22 and 38-64 will be pending. Claims 57-64 are added. Claims 19 and 22 are amended.

**REJECTION UNDER 35 U.S.C. §112, SECOND PARAGRAPH**

Claims 19, 20, and 22 stand rejected under 35 U.S.C. §112, second paragraph for indefiniteness.

Claim 19 is rejected on the basis that it encompasses agonism and antagonism of the CCR5 receptor. It has been amended to recite antagonism. Basis is found at page 1, line 12-13 of the specification.

The term "genetically related" in claim 20 is said to be indefinite. Applicants respectfully submit

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that one skilled in this art would understand when a virus is genetically related to HIV. For this reason, it is submitted that an exact statement of degree is not required.

Claim 22 is rejected for containing overlapping Markush members. The claim is amended to eliminate the overlap.

#### **REJECTIONS UNDER 35 U.S.C. §112, SECOND PARAGRAPH**

Claims 19-22 stand rejected under 35 U.S.C. §112, first paragraph for lack of enablement on the basis that the compounds recited are not effective.

However, a specification that contains a teaching of the manner and process of making and using the invention in terms that corresponds in scope to those used in describing and defining the subject matter sought to be patented must be taken as in compliance with enabling requirement of the first paragraph of § 112 unless there is reason to doubt the objective truth of the statements contained therein which must be relied on for enabling support. In re Marzocchi, 169 U.S.P.Q. 367, 369 (C.C.P.A. 1971). The burden is on the Examiner to come forth with evidence to establish a prima facie case of non-enablement. Ex parte Hitzeman, 9 U.S.P.Q. 2d 1801, 1822 (Pat. Off. Bd. App. 1988); In Re Armbruster, 185 U.S.P.Q. 152, 153 (C.C.P.A. 1975); In re Marzocchi, 169 U.S.P.Q. at 370. See, MPEP 2164.04.

The Examiner has noted that the present compounds do not resemble prior art compounds used to treat conditions by modulation of the CCR5 receptor. It is respectfully submitted that applicants are not asserting an unprecedented utility. Antagonism of the CCR5 receptor has been associated with therapeutic intervention. Enclosed is a copy of Reynes et al.: Safety and Antiviral Effects of a CCR5 Receptor Antagonist in HIV-1 Infected Subjects, (Abstract; Antiretroviral Chemotherapy: New Agents; 9<sup>th</sup> Conference on Retroviruses and Opportunistic Infections, 2002). The Reynes et al. abstract reports that administration of a small molecule CCR5 receptor antagonist to HIV patients reduced viral load by at least 3-fold from baseline levels in 10 of the 12 subjects, with a 10-fold reduction in four patients. The fact that applicants' claims relate to a different small molecule antagonist should not, applicants submit, detract from the assertion of utility.

While the examiner notes that binding data alone do not show agonism or antagonism, the claims are now amended to recite antagonists.

The Examiner also indicates that binding to chemokine receptors is variable, pointing to Hesselgesser at page 15689. However, the genus of compounds encompassed by the present claims is submitted to be quite small, and the compounds encompassed would, it is submitted, be expected to share

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activity. Furthermore, activity of tested compounds within the genus is indicated in the present specification at page 62. With respect to Hesselgesser, a certain degree of variation would normally be expected for different compounds of similar structure.

The Examiner points to a lack of in vivo data. Such data is not, it is submitted, required, particularly in view of the Reynes reference describing effects of CCR5 receptor antagonism in vitro.

For these reasons, withdrawal of the rejection of claims 19-22 under 35 U.S.C. §112, first paragraph for lack of enablement is respectfully requested.

#### **PROVISIONAL REJECTION FOR NON-STATUTORY DOUBLE PATENTING**

Claims 1-9, 19-22, and 38-56 stand provisionally rejected for obviousness-type double over the claims of copending application 09/454,578. Applicants believe that the Examiner intended to refer to serial no. 09/452,578.

It is submitted that "[t]he fact that a claimed species or subgenus is encompassed by a prior art genus is not sufficient by itself to establish a prima facie case of obviousness" (MPEP 2144.08). It is further submitted that the breadth of the claims of serial no. 09/452,578 is sufficiently large so that a case of obviousness type double patenting is not raised. As the Examiner will appreciate, non-obviousness of a subgenus or species over a genus may be demonstrated where the genus is sufficiently large. It is submitted that this is the situation in the present case, where the 09/452,572 claims encompass a very large genus, of which the presently claimed species forms but an extremely small part. Finally, applicants submit that neither the genus nor the species disclosed in the cited application provide any motivation to select the claimed subgenus or species.

In view of the apparent lack of a prima facie case of obviousness, withdrawal of the non-statutory double patenting rejection of claims 1-9, 19-22, and 38-56 is requested.

#### **CONCLUSION**

This application is submitted to now be in condition for allowance. Issuance of a notice to that effect is respectfully requested.